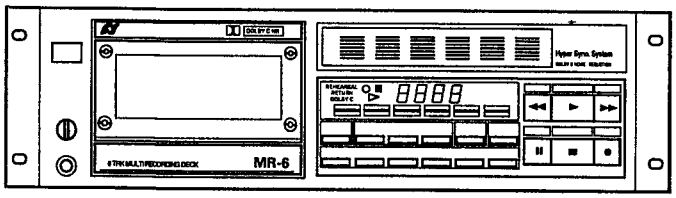
6TRK MULTI RECORDER

MR-6

OPERATING INSTRUCTIONS



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION; TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilaterl triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

- **The model No. and Serial No. of your unit are shown on its back panel.**
- **SANSUI attests that this product conforms with EEC directive 82/499/EEC.**

SANSUI

Thank you for purchasing this fine SANSUI product. Taking the time to read these operating instructions carefully before use will acquaint you fully with all its features and help ensure optimum performance.

*** In order to simplify the explanations may sometimes difer from the originals.**

Precautions

Power plug

When disconnecting the power cord from the power outlet, always take hold of the plug, and not the wire, and pull free. Never connect or disconnect the power plug with wet hands since you may receive an electric shock.

* Remember to disconnect the power plug from the power outlet when you do not intend to use the unit for a prolonged period of time.

Do not remove the case

Any inspections or adjustments inside the unit may lead to malfunctions and electric shocks. Do not touch any of the inside parts.
SANSUI's warranty is not effective if a deterioration in the unit's performance results from remodeling inside.

Installation precautions

Do not install the unit in any of the following locations since this may result in a deterioration in performance or malfunction:

* Locations exposed to direct sunlight or near objects radiating heat such as heating appliances.
* Locations exposed to moisture or humidity.
* Locations with poor ventilation exposed to dust and dirt.
* Locations which are unstable and not perfectly flat or which are susceptible to vibration.

Do not wipe with thinner

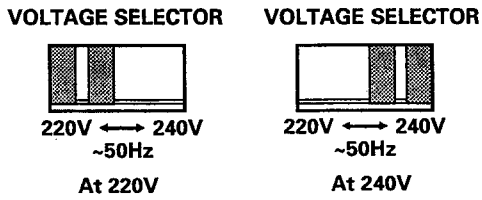
Wipe the panels and case from tine to time with a soft cloth. Using any kind of thinner, alcohol or volatile liquid will mar the surface, cause blotching on the exterior and erase the markings and should therefore be avoided.
Do not use insecticide sprays in the vicinity.

Before connecting the power plug

Before connecting the power plug to an electrical outlet, check to be sure that the unit is set to the proper voltage for your area. If the voltage of the unit is improperly set, fire hazard or damage to the unit may result. If you find that the unit is not set to the proper voltage for your area, follow the instructions listed below:

• Units with 220V/240V VOLTAGE SELECTOR switch at rear panel

These units are set at either 220V or 240V with the VOLTAGE SELECTOR switch. To change the voltage, use a minus screwdriver or similar device to slide the switch.



• Units without voltage selector switch

Units destined for some areas are not fitted with a voltage selector switch due to laws and regulations existing in those areas. In such a case, the power supply voltage is set to the voltage used in the area where the unit is purchased.
If the unit is to be used in an area where the power requirements are different, make sure you consult your nearest authorized SANSUI Service Station.

For the Customers

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception.
It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules. which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the equipment with respect to the receiver
..... move the equipment away from the receiver
..... plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio - TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No.004-000-00345-4.

Notes on the Tape Decks

This unit is a 6-track one-way record/play deck with a tape speed of 9.5 cm/sec, which is twice that of ordinary cassette recorders. Therefore, take care in the following.

* This unit has been designed exclusively for use with C-60 High-position tapes.
Do not use normal tapes or "Metal" tapes.
Do not use C-90 or C-120 cassettes, for they use thin tapes that are stretched easily.

* Due to the one-way recording and doubled tape speed, a C-60 cas sette can be used for only 15 minutes of recording or playback.

* This unit is a one-way record/play deck.recording only on one side of a cassette. Do not attempt to record on the other side of a tape by placing it upside down, for this erases the previous recording backward.

* When inserting a cassette in a deck, place it securely by pushing the shell downward so that the front part of the shell is held by the claws on the left and right.

Connection

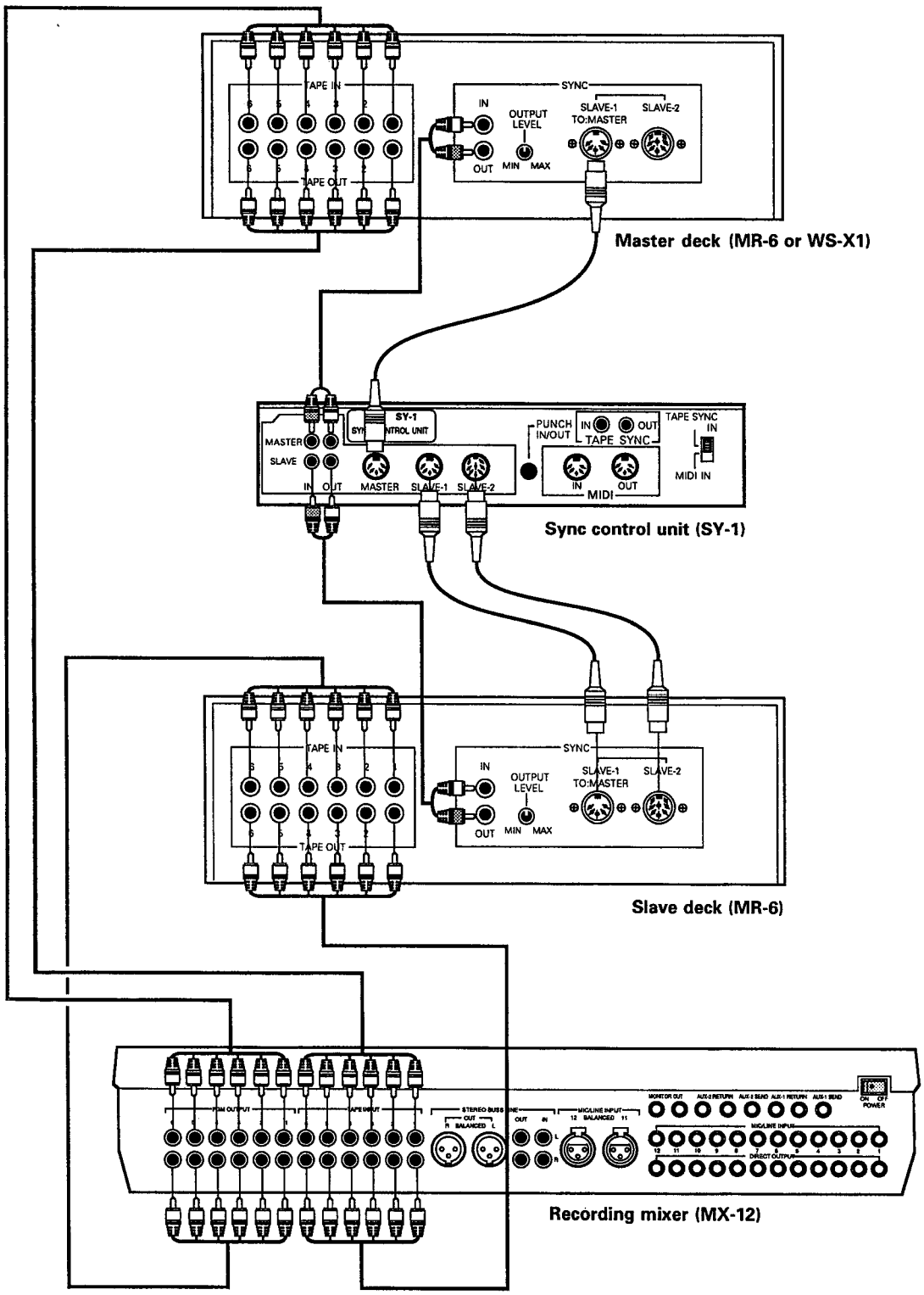
Connection precautions

* When connecting, either disconnect the power plug from the power outlet or turn off the unit's power using the POWER switch.

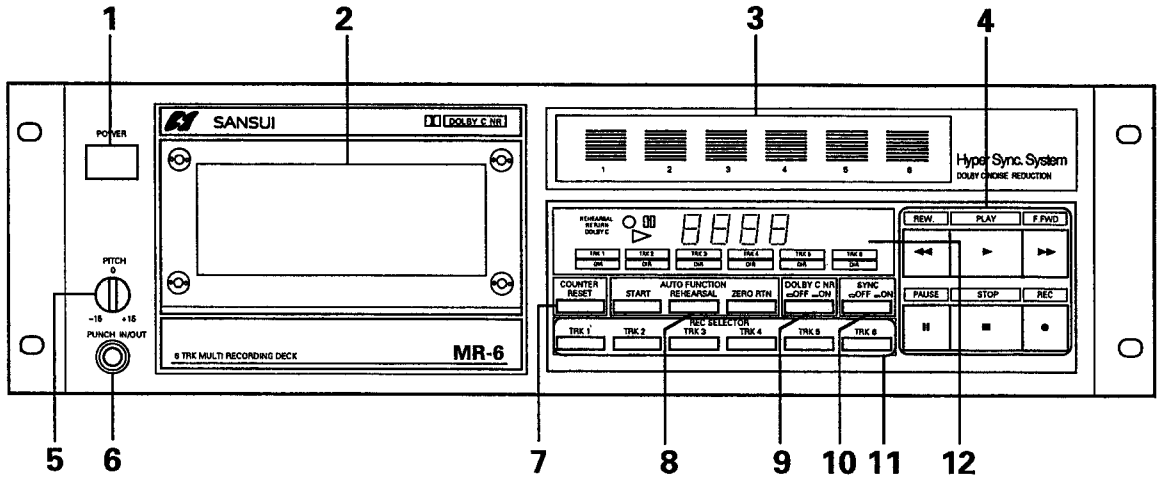
* Insert the plugs securely. Improper connection can lead to the generation of noise.

Rack-mount installation

This unit can be mounted in an EIA-standard 19-inch rack by means of the rack-mount angle brackets provided on the two sides. For rack mounting, remove the four feet from the bottom of this unit and mount using screws and washers.



Panel information



1. POWER switch

Press to switch the power of this unit ON. The tape counter displays "0000" when this unit becomes ready for operation. Pressing the switch again switches the power OFF.

2. Cassette holder

Open the door and insert cassette tape.

3. Level meter

Displays the playback level during tape playback and recording level during recording.

4. Deck operation buttons

REW (◀◀): Press this button to rewind tape. When the button is held depressed during playback, high-speed monitoring occurs until the finger is removed, after which normal playback resumes.

PLAY (▶): Press to start playback or recording.

F.FWD (▶▶): Press this button to fast forward tape. When the button is held depressed during playback, high-speed monitoring occurs until the finger is removed, after which normal playback resumes.

PAUSE (⏸): Press to pause recording or playback temporarily. Pressing the PLAY button resumes it.

STOP (■): Press to stop tape transport.

REC (●): Press the enter the Record pause mode. The recording can be started by pressing the PLAY button.

* Recording cannot be initiated unless the REC SELECTOR has been selected.

5. PITCH control

Turn this knob to vary the tape speed of recording or playback.For normal recording or playback or for sync operation, set the control to the center "0" position.

6. PUNCH IN/OUT Terminal

To connect a remote-controlled pedal-type punch in/out console.

7. COUNTER RESET button

Returns the reading on the counter to "0000."

8. AUTO FUNCTION Buttons

Using this button, you can repeat the same portion of a tape over and over during recording or play (Auto Rehearsal Function), or automatically rewind the tape to the portion indexed by "0000" on the counter (Zero Return Function).

START: By pressing the START button while the deck is in stop or play mode, you can select the auto function play mode, with counter automatically reset to "0000."

REHEARSAL: During auto function play, press the REHEARSAL button to let the built-in memory memorize the tape's current position. Then, the tape rewinds itself to the counter "0000" index, plays from there to the counter-memorized position, and finally rewinds to the counter "0000" index once again – all automatically.

ZERO RETURN: Press the ZERO RETURN switch during auto function play, and the tape's position at the time of pressing the button is memorized. Then the tape automatically rewinds itself to the counter "0000" position and stops. Press the PLAY button – play starts and continues to the counter-memorized position, then the tape automatically rewinds itself to the "0000" index on the counter. The ZERO RETURN function can be initiated during normal playback as well.

9. DOLBY* C NR switch

When the Dolby C NR is to be used, press this switch to ON. The Dolby NR is switched ON/OFF for all of the six tracks simultaneously.

*** Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.**

"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

10. SYNC ON/OFF switch

This is a switch to record a sync signal on track 6 of a tape if desired.

ON: This position records the sync signal fed to the SYNC IN terminal on track 6 of the tape. A SYNC IN terminal is located at the back of the unit. To record sync signals, the REC SELECTOR switch should be set to DIRECT/SYNC.

OFF: This permits recording of a signal from the mixer; the sync signal applied to the SYNC IN terminal will not be recorded.

11. REC SELECTOR switches

These switches allow to select the Record mode for Tracks 1 to 6. When one of the switches is pressed, the DIR indicator lights and " ○ " indicator blinks indicating that the track is available for recording.

12. Display

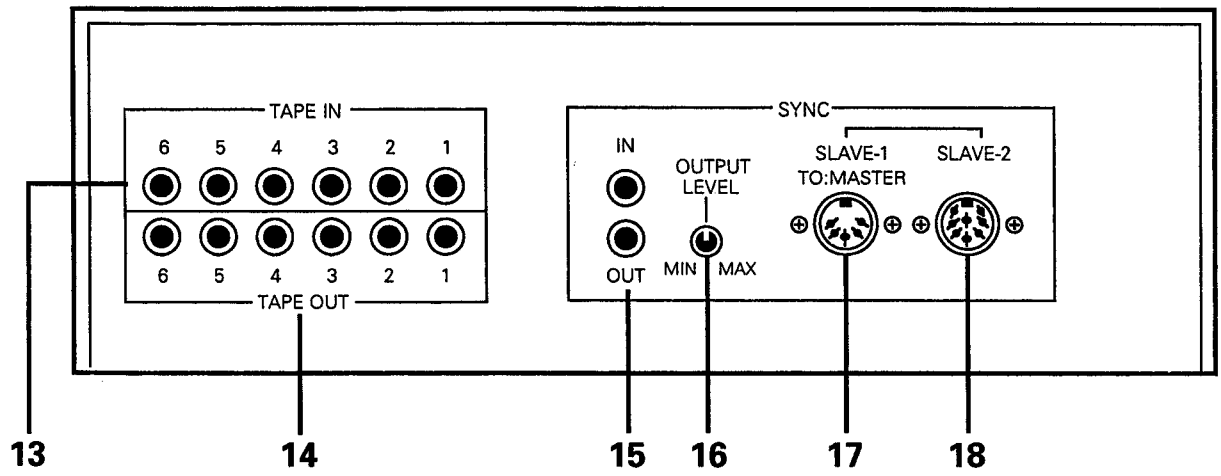
Rec indicator (○): This indicator blinks in record-pause mode, and lights in record mode.

Play indicator (▷): This indicator lights in play mode .

Pause indicator (⏸): This indicator lights in pause mode .

Tape counter: The tape counter reading increments while the tape runs in the forward direction, and decrements while it runs in the reverse direction.

DIR (direct) indicator: When one of the REC selector switches is pressed, this indicator lights indicating that the track is available for recording.



Rear Panel

13. TAPE IN jacks
A recording signal input jack is provided for each of Tracks 1 to 6. Connect the jacks with the program output jacks of the external mixer (MX-12, etc.).

14. TAPE OUT jacks
A playback signal output jack is provided for each of Tracks 1 to 6. Connect the jacks with the tape input jacks of the external mixer (MX-12, etc.).

15. SYNC IN/OUT jacks
For sync recording of tapes, connect these jacks with the SYNC IN/OUT jacks of the Sync Control Unit (SY-1).

16. SYNC OUTPUT LEVEL Control
To adjust the level of the signal going out from the SYNC OUT terminal.

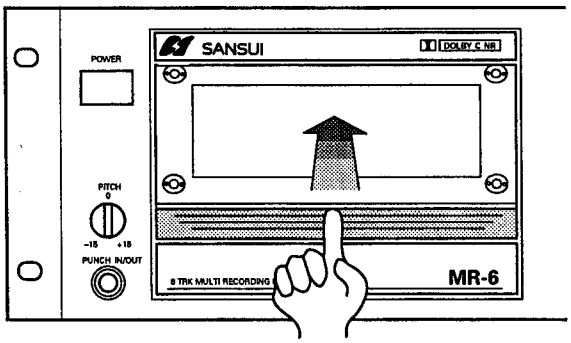
17. SLAVE-1/TO MASTER jack
For sync recording of tapes, connect this jack with one of the SYNC jacks of the Sync Control Unit (SY-1).Connect to the MASTER jack of the SY-1 when this deck is used as the master, or to the SLAVE-1 jack of the SY-1 when this deck is used as a slave.

18. SLAVE-2 jack
When this deck is used as a slave, connect this jack with the SLAVE-2 jack of the SY-1. When this deck is used as the master, leave this jack without connecting anything.

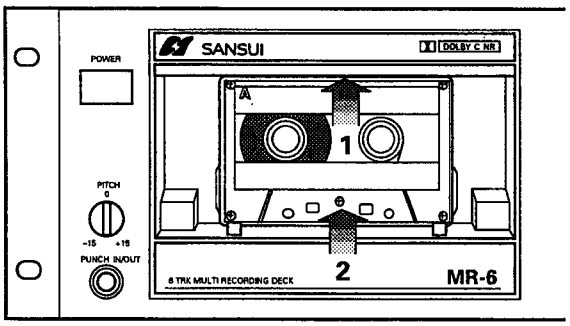
Operating procedures

Loading the cassette tape

1. Open the door and insert cassette tape.



2. Set the cassette securely so that the lower sides are locked by the pawls on the left and right.



Use the following procedure for recording onto up to six tracks by combination with the MX-12 Mixer.

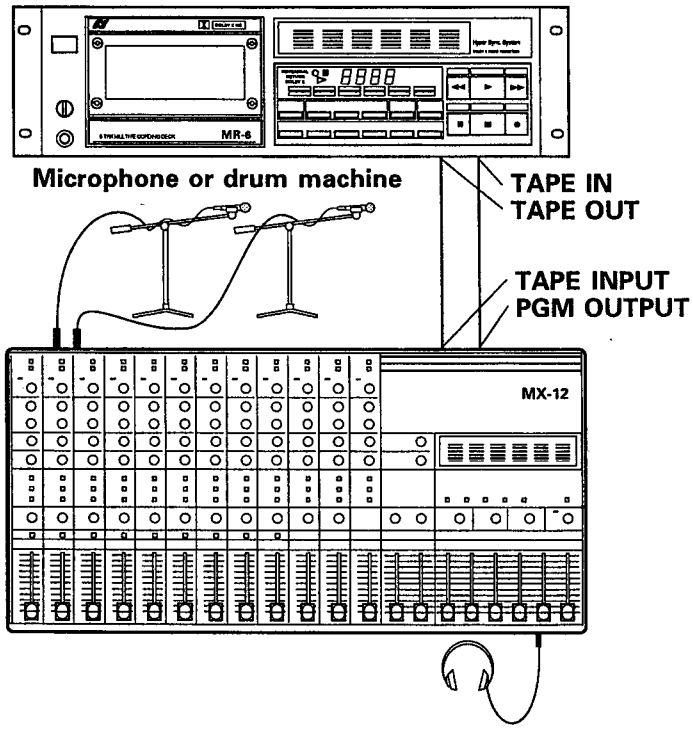
Basic recording

The basic recording refers to the recording of the rhythm section, etc., of a tune. This is the basic operation in multi-track recording, and other tracks are recorded based on the track recorded by basic recording. Normally, record the rhythm instruments such as the drums, percussion and bass in the basic recording track. In some cases, the basic recording may consist of the clock sound with tempo.

Operation example: To record rhythm section in Track 1

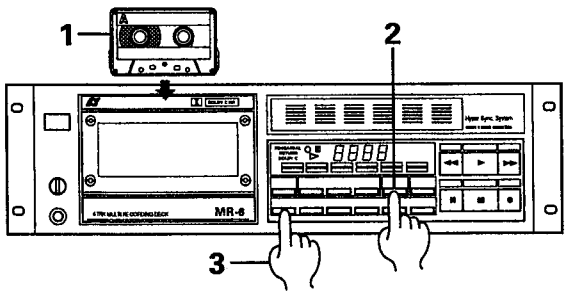
Connection

Connect the components as follows.



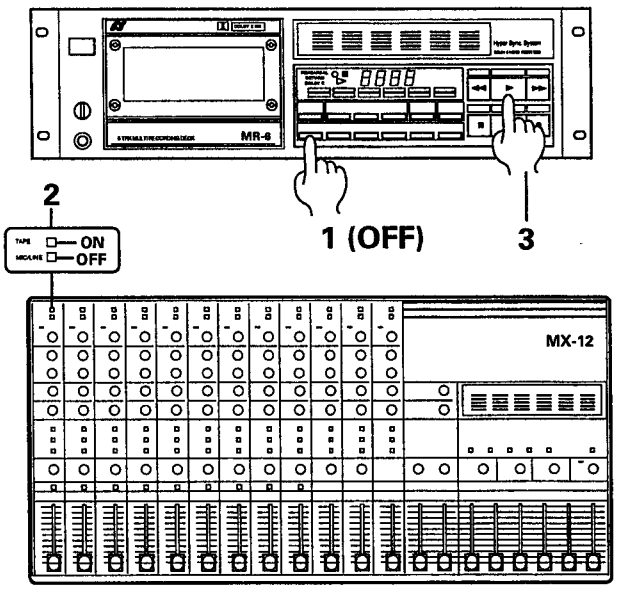
Level setting

(1) Insert a recordable High-position tape (C-30, C-60).
(2) Set the DOLBY NR switch as required.
(3) Press the REC SELECTOR switch of the track to be recorded onto (i.e. TRK-1 switch). The record indicator blinks, and the DIR indicator lights to indicate the track to be recorded.
(4) Play the musical instruments, operate the MX-12, and adjust the recording level so that the readings of the level meter of both MR-6 and MX-12 do not exceed 0 dB. (For details, please refer to the Instruction Manual of the MX-12.)



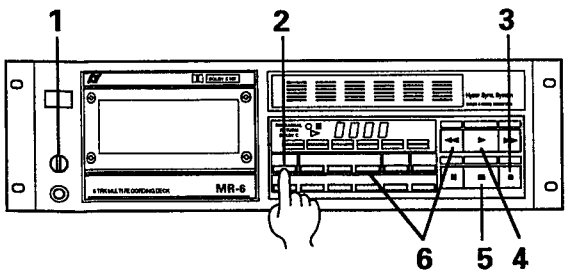
Checking basic recording

(1) To prevent accidental erasure of recorded sound, press the TRK-1 switch of REC SELECTOR to OFF.
(2) Set the input selector for CH 1 of the MX-12 to TAPE.
(3) Press the PLAY button to play the tape, and monitor with headphones or speakers.



Recording

(1) Set the PITCH control to the center position.
(2) Press the COUNTER RESET button to reset the tape counter to "0000".
(3) Press the REC button to enter the Record-pause mode.
(4) Press the PLAY button to start recording. The record indicator stop blinking and lights steadily, indicating that the recording is in course.
(5) After the required part has been recorded, press the STOP button to stop recording.
(6) Press the REW button or ZERO RTN button to return the tape to the start point.



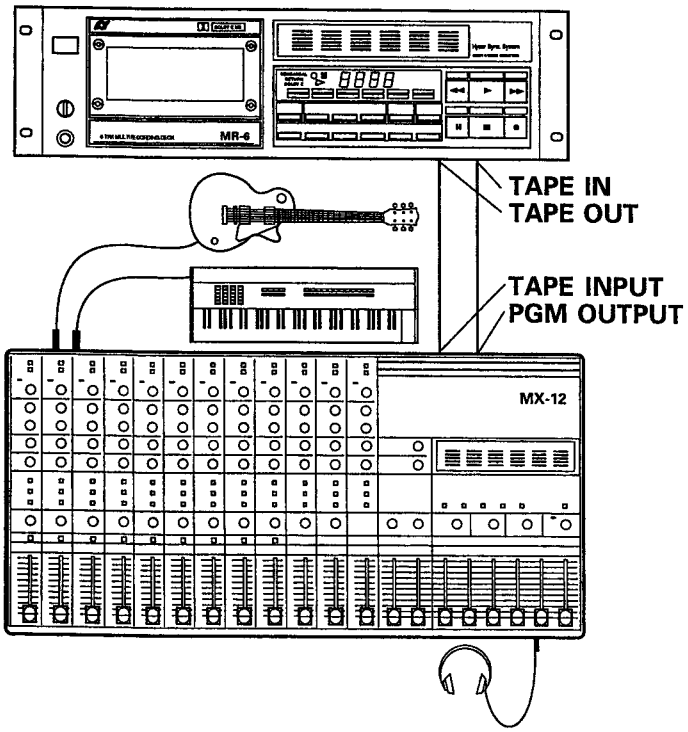
Overdubbing

The procedure for overdubbing other sections is the same as for basic recording except that the recorded tracks are different.

Operation example: To record keyboard and guitar sound on Track 2

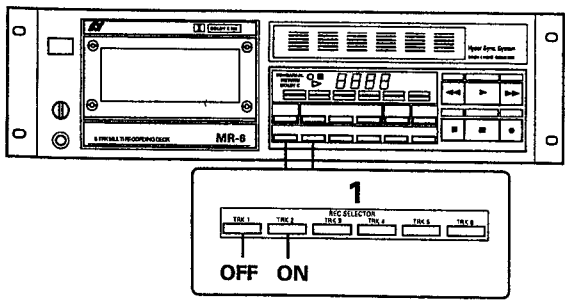
Connection

Connect the components as follows.



Level setting

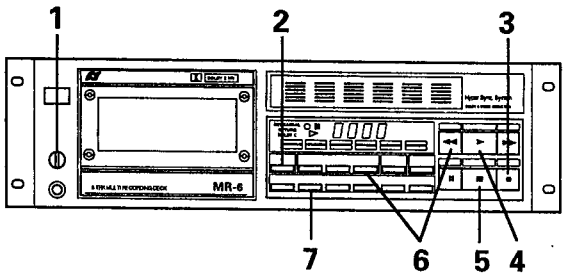
(1) Press the REC SELECTOR switch of the track to be recorded onto (i.e. TRK-2 switch). The record indicator blinks, and the DIR indicator lights to indicate the track to be recorded. Ensure that the TRK-1 switch is OFF.
(2) Set the input selector for CH 1 of the MX-12 to TAPE, and that for CH 2 to MIC/LINE.
(4) Play the musical instruments, operate the MX-12, and adjust the recording level so that the readings of the level meter of both MR-6 and MX-12 do not exceed 0 dB. (For details, please refer to the Instruction Manual of the MX-12.)



Recording

(1) Set the PITCH control to the center position.
(2) Press the COUNTER RESET button to reset the tape counter to "0000".
(3) Press the REC button to enter the Record-pause mode.
(4) Press the PLAY button to start recording. The record indicator stop blinking and lights steadily, indicating that the recording is in course. The sound is recorded onto Track 2 while monitoring the sound of Track 1.
(5) After recording, press the STOP button to stop recording.
(6) Press the REW button or ZERO RTN button to return the tape to the start point.
(7) To prevent accidental erasure of recorded sound, press the REC SELECTOR switch (TRK-2) to OFF.

Perform overdubbing on other tracks (TRK-3, TRK-4) with the same procedure as above. After each recording, check the recorded sound with the same procedure as for checking the basic recording result.



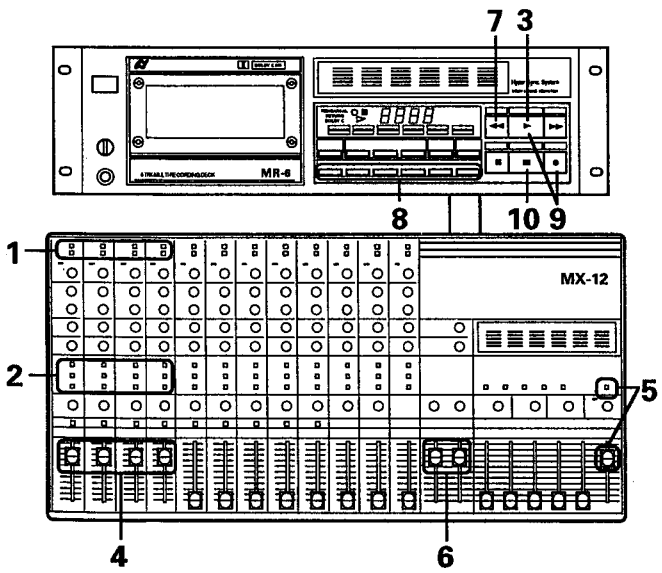
Ping-pong recording

After Tracks 1 to 4 have been recorded, their sounds can be mixed and recorded onto Track 6 (ping-pong recording). Tracks 1 to 4 then can be used to record other sounds.

Operation example: To mix sounds of Tracks 1 to 4 and record the mixed result on Track 6

Level setting/recording

(1) On the mixer (MX-12), press the TAPE switches of the input selectors of CH 1 to CH 4.
(2) On the mixer, press the 5-6 switches of the ASSIGN selectors of CH1 to CH4. This allows to record the signals input at CH 1 to CH 4 in Track 6.
(3) Press the PLAY button of this unit to start playback.
(4) On the mixer, set the input level controls of CH 1 to CH 4 to the scale reading range of "7" or "8".
(5) On the mixer, press the meter function switch for the track display mode, and adjust the program level control of CH 6 so that the recording level does not exceed 0 dB.
(6) Adjust the balance between the sounds of different tracks by controlling the LEVEL, MASTER and EQ controls as required.
(7) Rewind the tape to the point where ping-pong recording is to be started.
(8) On the MR-6, set the TRK-1 to TRK-4 switches of the REC SELECTOR to OFF, and set the TRK-6 switch to ON.
(9) Press the REC button then the PLAY button to start recording.
(10) After recording, rewind the tape and check the content.



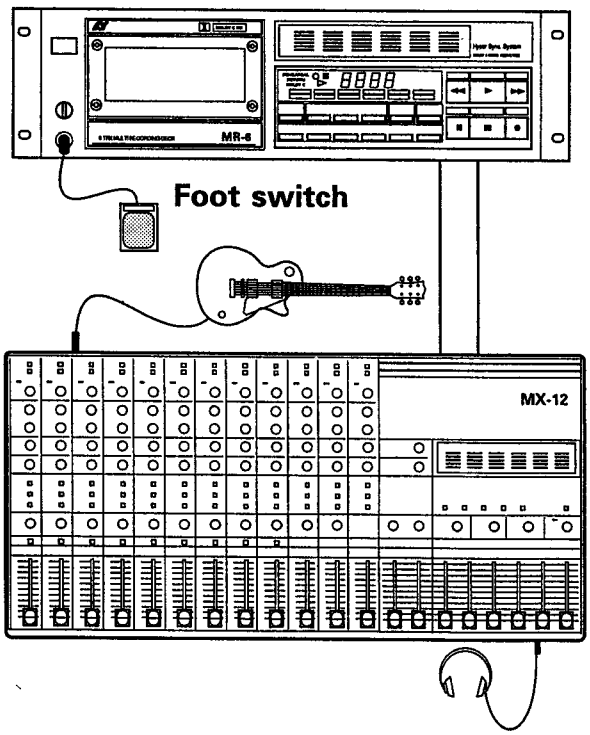
Punch-In/Punch Out

These functions allow to re-record a part of recorded performance which contains a mistake. After starting playback, Punch-In can be activated just before the part containing mistake to change the deck operation mode from Play to Record and replace that part with new recording. Punch-In refers to the mode change from Record mode to Play mode.

Level setting/recording

(1) Set the MX-12 ready for recording onto the track to be re-recorded.
(2) Press the REC SELECTOR switch corresponding to the track to be re-recorded.
(3) Connect the footswitch to the PUNCH IN/OUT jack on the front panel.
(4) Press the PLAY button to start playback, and play the part to be re-recorded together with the played sound. For smooth level matching and practice, it is recommended to use the REHEARSAL function provided in the AUTO FUNCTION.
(5) After level matching, press the PLAY button to start playback, and press the footswitch at the beginning of the part to be re-recorded to put the deck in the Record mode.
(6) After re-recording, press the footswitch again to put the deck in the Play mode. Now the re-recording is completed.

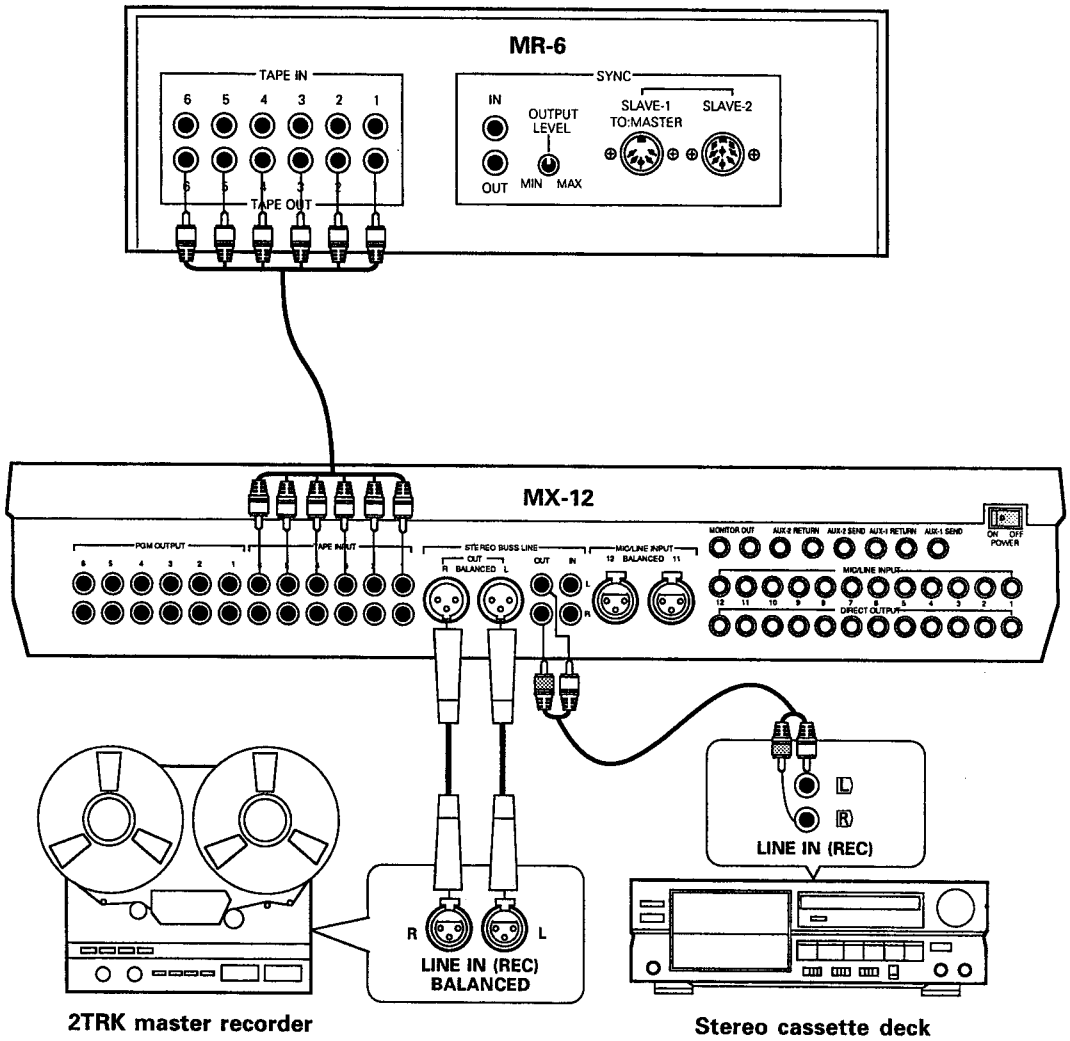
* Use a non-lock type foot switch (which is turned ON only in the moment it is pressed down).



Mix Down

The sound of the six tracks recorded by overdubbing is re-mixed and dubbed on a two-channel recorder in order to create the stereo master tape. Several types of master tapes can be created by applying different tone control, reverb effect, etc., to the original sound.

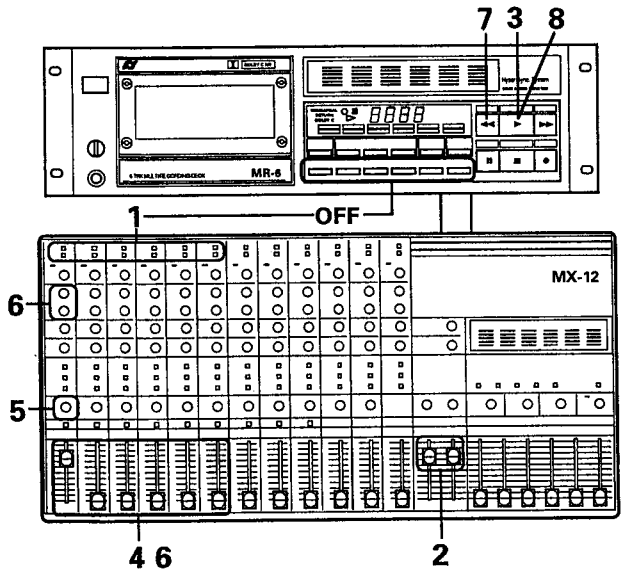
Connection



2TRK master recorder

Stereo cassette deck

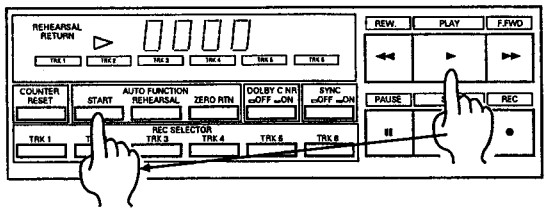
Level setup
The level of each track should be adjusted track by track.
(1) On the mixer, press the TAPE input selector switches of CH1 to CH 6. On the deck, set the REC SELECTOR switches of Tracks 1 to 6 to OFF.
(2) Set the master level control to the scale of "7" to "8".
(3) Press the PLAY button to start playback.
(4) Set the input level control of CH 1 to the scale of "7" to "8". The input level controls of other channels should be set to "0".
(5) Adjust the PAN control to locate the Track 1 sound at the desired position between the left and right.
(6) Adjust the tone with the EQ control as required.When the adjustment for CH 1 has been completed, set the input level control to "0", and adjust the next channel with the same procedure as above.
(7) When the adjustments of all channels have been completed, rewind the tape to the start point and set the input level controls of all channels to the scale of
"7" to "8".
(8) Press the PLAY button again to start playback, and check the overall sound balance.When checking the overall balance, it is recommended to use the monitor speakers for they will make it possible to confirm the actual acoustic image and sound expansion.



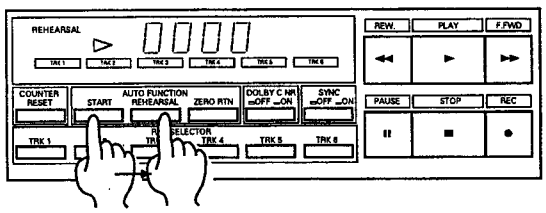
Dubbing
(1) Insert a recordable tape in the external master deck.
(2) Set the external master deck in the Record-pause mode, play the deck and adjust the recording level.
(3) Rewind the tape to the start point, put the deck in the Play mode and put the external master deck in the Record mode to start dubbing.
(4) After Mix Down dubbing, rewind the tape to the start point again.

AUTO FUNCTION

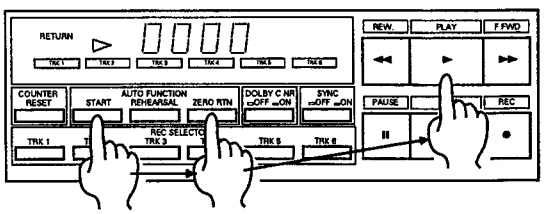
These functions allow to play the same part of tape repeatedly, and are convenient for rehearsal.
(1) Play the tape, and press the START button at the point you want to start rehearsal. The counter reading is reset to "0000", the REHEARSAL RETURN indicator blinks, and that point is memorized.
* The tape playback starts if the START button is pressed in the Stop mode.



(2) To repeat a specific part automatically: After the part subject to rehearsal has been played, press the REHEARSAL button. The REHEARSAL indicator lights steadily, that point is memorized, the tape is returned until "0000", playback starts automatically, and the part between the two memorized points are played repeatedly.



(3) Manual rehearsal: After the START button has been pressed and the part subject to rehearsal has been played, press the ZERO RETURN button. The tape is rewound to "0000" and stops automatically. Then press the PLAY button. The tape is played until the point where the REHEARSAL button was pressed, then it is rewound automatically until "0000", where it stops.
* During normal playback, pressing the ZERO RETURN button also rewinds the tape until "0000".



Tape Sync system

The Tape Sync feature allows to play MIDI instruments automatically in synchronism with the tape playback by means of the sync signal recorded on the tape, or to operate another deck (MR-6 or WS-X1) in synchronism with this deck, using the two decks as one 10-channel tape deck. (For details, please refer to the Instruction Manual of the SY-1.)

Tape Sync operation with MIDI musical instruments

The MIDI signal cannot be recorded on tape in the original format. To record the MIDI signal, it should be converted into FSK signal by a MIDI/FSK converter. The MIDI/FSK converter is built in the optional SY-1 Sync Control Unit, and it is also built in some MIDI sequencer and drum machine models.

Operation of two tape decks with SY-1

By connecting two MR-6 decks (or MR-6 and WS-X1) and one SY-1 (Sync Control Unit) and recording sync signal on Track 6 of each deck, the two decks can be controlled simultaneously from the SY-1 so they can be used as one single 10-channel tape deck.

Specifications

Tape recorder section

Tape type..... C30-C60 Cassette tape (chrome)
Track format..... 6-track, 6-channel record/play
Tape speed/Deviation.....9.5 cm ±1 % per second
Pitch control.....±20 %
Wow & flutter.....0.06 % (NAB weighted)
Sync out.....–10 dBV/100 ohms
Frequency response.....40 to 15,000 Hz ±3 dB
Channel separation..... 50 dB (1kHz, 0VU)
Erasure..... 70 dB (1kHz)

Others

Power requirements
For U.S.A. & Canada.....AC 120 V, 60 Hz
For Europe.....AC 220 V/240 V, 50 Hz
Power consumption..... 37 watts
Dimensions.....482 mm (18") W
145 mm (5-3/4") H
336 mm (13-1/4") D
Weight.....6.7 kg (14.8 lbs) net

* **Design and specifications subject to changes without notice for improvements.**
* **Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.**

SANSUI

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